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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,272	11/26/2001	Roel Van Woudenberg	NL 010154	8820

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EXAMINER

PSITOS, ARISTOTELIS M

ART UNIT	PAPER NUMBER
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2656

DATE MAILED: 11/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/994,272

Applicant(s)

VAN WOUTENBERG, ROEL

Examiner

Aristotelis M. Psitos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 11-26 is/are pending in the application.
- 4a) Of the above claim(s) 20-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-19, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/12/05 has been entered.

Claims 20-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 5/21/04.

In the following analysis the examiner has grouped the following claims together, i.e., common subject matter/analysis:

Group A: Claims 1-3,5,11,12,14 and 18; two inform. Layers with an offset capability.

Group B: Claims 4,6-8,13,15-17,19,25 and 26; two inform. Layers with no offset capability and a desired laser beam diameter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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1. Claims 4,6-8,13,15-17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 00/16320, or alternatively under 35 USC 103 (a) as being obvious thereover further considered with Satoh.

The following analysis is made:

Claim 4	EP document
A multi-layer record carrier provided	see abstract & paragraphs
with at least two substantially parallel information layers	14 & 17
and capable of being scanned by a single scanning device, wherein	
data is written in units of data blocks on	see figure 3 and its description
tracks of said at least two information layers,	
a first guard field being written at a start of a	areas 35 and 36 in figure 3
data block and a second guard field being written	
at an end of said data block,	
characterized in that	
in at least an upper information layer of	
said at least two substantially parallel information layers,	
said first and second guard fields have lengths	see paragraph 61
such that an end position of said second guard field	
of a preceding data block is located within	
an area of said first guard field of a succeeding data block.	

With respect to independent claims 4 and 13, the preamble of this claim is the same as that of independent claims 1 and 11 respectively and no further analysis is made.

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With respect to the ultimate paragraph in these claims (same subject matter), it describes a desired length of the guard fields in relation ship to a beam diameter when an optical beam is focused onto the lower of the two layers.

The examiner concludes that the WO document has such a capability, i.e., the focusing of an optical beam (which has a beam diameter) upon the lower of the two information layers. As further noted in paragraph 0120 of the WO document the in within a range of 20-100 mum in diameter.

Although there is no clear depiction of a minimum length of the guard fields in the WO document, because the document provides for an overlap from 0 to a maximum as discussed in paragraph 0061, and a light beam diameter from 20-100 mum is permitted, that a minimum length as recited if not inherently present is an obvious design capability for optimizing system parameters – see In re Peterson, 65 USPQ2nd 1379.

With respect to claim 19, this is drawn to a recording apparatus for yielding the format described in the ultimate paragraph thereof (which is the same as that found in claim 4 above).

The elements recited, radiation source, recording unit and control unit and their respective functions are considered inherently present in the above WO document – see the ability of recording with respect to figure 4.

Alternatively, if applicant can convince the examiner that such elements are not inherently present, then the examiner would reject the claims under 35 USC 103 because the existence of such elements, radiation source, recording unit, and a control unit are considered notoriously old and well known.

It would have been obvious to modify the base system of the WO document with the old and well known components identified above motivation is to provide for the recorded signal format disclosed in the WO document.

With respect to claims 6 and 15, as far as can be deciphered from the WO document, the length of the guard fields in each information layer is equal.

With respect to claims 7 and 16, the guard areas are so located wherein the examiner interprets the address portions as the header, and the length of such are either greater than or equal to half the

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beam diameter which is discussed in paragraph 0120 (20-110 mum diameter yielding a length from 10-50 mum).

With respect to claims 8 and 17, the gap lengths as depicted in the WO document meet these claims, (equal length in both information layers).

As is known in the optical field, TP (track pitch) is the distance between the centers of two adjacent tracks, which includes guard band areas.

Satoh et al discusses a multilayered system, wherein the layers are offset by an appropriate amount, as well as tp – see col. 5 under the heading embodiment III. Since the tp is in this environment is nominally less than 5mum, and from the above the beam spot size runs as described above, the setting of a minimum length for the guard field is considered within the above range and hence it would have been obvious to one of ordinary skill in the art, setting the tp range accordingly in order to permit the offsetting of the planar information recording layers to reduce crosstalk as discussed in Satoh et al.

2. Claims 5,14,25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 4 and 13 above, and further in view of Saito et al.

Saito et al teaches the ability of having/placing/recording dummy data in the appropriate fields to ensure proper synchronization of the information. Applicant's attention is drawn to figure 2 for instance. The examiner concludes the ability of dummy blocks as also teaching dummy data.

It would have been obvious to modify the base system as relied upon above in paragraphs 2 with the additional teaching from Saito et al, motivation is as discussed in Saito et al to provide appropriate synchronization upon use of the information.

3. Claims 4, 25, 13, 26, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Ogawa et al or alternatively under 103 (a) as obvious over EP 1128368A1.

The following analysis is made:

Claim 4

A multi-layer record carrier provided

Ogawa et al

see abstract & col. 2 lines

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with at least two substantially parallel information layers,
and capable of being scanned by a single scanning
device, wherein

data is written in units of data blocks on
tracks of said at least two information layers,

a first guard field being written at a start of a
data block and a second guard field being written
at an end of said data block,

characterized in that

in at least an upper information layer of
said at least two substantially parallel
information layers,

said first and second guard fields each have
a predetermined minimum length, which is
approximately equal to the sum of half the
diameter of the radiation beam in the upper one of
said at least two information layers when focused
on the lowest one of said at least two information
layers and a maximum allowed misalignment between
the two information layers.

17-58.

see figure 2 and its description
information is written in blocks

dummy data region, 201 for
instance. See below further
explanation.

see discussion with respect to figures
6 and 9 and col. 16 lines 26 till end.

Ogawa et al discloses a multilayered disc wherein data is written in blocks. As disclosed therein,
there is a dummy region, which the examiner interprets as the claimed guard field. Although the reference
clearly depicts such an area at the beginning of each data block, it is not clear if such an area is found at
the end of each block. Nevertheless such regions are provided straddling the index regions 12. The
examiner hence concludes that there is indeed a dummy area/region at both the beginning and end of
each data block. The examiner equates the dummy area(s) as the claimed guard field(s).

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Alternatively, if applicant can convince the examiner that such is not inherently present, then under 103 considerations the examiner would rely upon the teaching from the above noted EP document – see the discussion with respect to the guard fields. Motivation is to use existing signal formatting so as to allow the above system to Ogawa et al to be backward compatible with existing signal processes.

With respect to the desired min. length recitation as found in the ultimate paragraph above, note that col. 16 lines 26 plus (till end of this column at least), The examiner concludes that the required minimum is so met.

With respect to claims 13 (method of) and 10 (apparatus for) they are met by the above reference(s), when the system operates (method) and by the apparatus depicted in Ogawa et al (apparatus claim 10).

Dependent claims 25 and 26 are met by the dummy data.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

4. Claims 6-8 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 4 and 13 as stated in paragraph 6 above, and further in view of EP 1128368A1.

With respect to claims 6 and 15, as noted in the above Ogawa et al document, various ranges for the dummy areas are provided for. Hence in keeping with In re Peterson, 65 USPQ2nd 1379 selecting the ranges such that they are equal would be an obvious variant to one of ordinary skill in the art.

With respect to claims 7,8 and 16 and 17, the EP document depicts the gap as noted, wherein as depicted the gap also has a range in relationship with the guard band and selection of such a value would also be an obvious variant.

5. Claims 1,2,3,11,12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1128368A1 further considered with Van Den Enden et al.

The following analysis is made:

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Claim 1

EP 1128368I

A multi-layer record carrier provided
with at least two substantially parallel information layers
and capable of being scanned by a single scanning
device, wherein

see abstract & paragraphs

14-17

data is written in units of data blocks on
tracks of said at least two information layers,

see figure 3 and its description

a first guard field being written at a start of a
data block and a second guard field being written
at an end of said data block,
characterized in that
in at least an upper information layer of
said at least two substantially parallel
information layers,

areas 35 and 36 in figure 3

said first and second guard fields have lengths
such that an end position of said second guard field
of a preceding data block is located within
an area of said first guard field of a succeeding data block.

see paragraph 61, and
alternatively see fig. 7 of Van Den
Enden et al.

The EP document is relied upon for the reasons stated above. In keeping with the interpretation argued by applicant, that is that the ultimate paragraph refers to the data blocks in a single plane, note the description of Van Den Ended et al for providing the overlapping of the "linking area". The examiner interprets the "linking" area as the claimed guard field areas.

It would have been obvious to modify the base system of the EP document, so as to ensure proper signal processing as discussed by Van Den Enden et al and provide for the overlapping of the "linking" /guard fields.

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6. Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1 and 11 as stated in paragraph 5 above, and further in view of Miyauchi et al.

With respect to the additional ability of writing "dummy" data into these guard regions, such is taught/disclosed by the Miyauchi et al reference – see the description with respect to dummy data generator in figure 3 for instance.

It would have been obvious to modify the base system with this additional teaching, motivation is as discussed in Miyauchi et al.

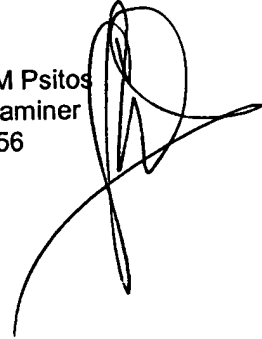
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M. Psitos whose telephone number is (571) 272-7594. The examiner can normally be reached on M-Thursday 8 - 3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aristotelis M Psitos
Primary Examiner
Art Unit 2656



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